

Supplemental Data

Lens Specification Is the Ground State

of All Sensory Placodes, from which

FGF Promotes Olfactory Identity

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Table S1. Specification of the Preplacodal Region at HH6

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	NP	AO
Neural marker							
<i>Sox2</i> (0hrs)	0/2	0/2	0/3	0/1	-	3/3	-
%	0%	0%	0%	0%	-	100%	-
Pre-placodal region							
<i>Six1</i> (5hrs)	3/3	9/9	9/9	5/5	0/5	0/7	0/10
%	100%	100%	100%	100%	0%	0%	0%
<i>Eya2</i> (5hrs)	3/3	7/7	9/9	7/8	1/3	9/9	0/7
%	100%	100%	100%	88%	33%	100%	0%
Lens markers							
<i>Pax6</i> (5hrs)	4/4	8/8	10/10	6/7	0/6	6/6	0/11
%	100%	100%	100%	86%	0%	100%	0%
<i>L-maf</i> (38-42hrs)	9/9	14/14	16/16	9/10	0/6	0/11	0/11
%	100%	100%	100%	90%	0%	0%	0%
<i>FoxC1</i> (38hrs)	2/2	8/8	7/8	4/5	-	-	-
%	100%	100%	87.5%	80%	-	-	-
<i>Sox2</i> (38hrs)	-	2/2	-	-	-	-	-
%	-	100%	-	-	-	-	-
<i>FoxC1</i> (72hrs)	5/7	12/15	15/15	16/17	1/5	-	0/3
%	71%	80%	100%	94%	20%	-	0%
<i>δ-crystallin</i> (72hrs)	2/2	8/8	5/6	4/5	-	-	-
%	100%	100%	83%	80%	-	-	-
<i>δ-crystallin</i> (protein, 72hrs)	7/7	12/12	11/12	5/6	1/7	0/8	0/6
%	100%	100%	93%	83%	14%	0%	0%
<i>α-crystallin</i> (protein, 84 hrs)	7/7	8/8	8/10	8/12	-	-	-
%	100%	100%	80%	66%	-	-	-
Otic & trigeminal markers							
<i>Pax2</i> (protein, 24 hr)	0/3	0/7	0/8	0/6	-	-	-
%	0%	0%	0%	0%	-	-	-
<i>Pax2</i> (42 hr)	-	-	-	0/5	-	-	-
%	-	-	-	0%	-	-	-
<i>Pax3</i> (protein, 24 hr)	0/3	0/7	0/8	0/6	-	-	-
%	0%	0%	0%	0%	-	-	-

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	NP	AO
Adenohypophysis marker							
Lhx3 (protein, 42 hr)	0/5 0%	0/8 0%	- -	- -	- -	- -	- -
Olfactory placode marker							
<i>FoxG1</i> (72hrs) %	0/4 0%	0/5 0%	0/4 0%	0/3 0%	- -	- -	- -
<i>FoxG1</i> : FGF8 treated (72hrs) %	4/4 100%	7/8 88%	10/12 84%	1/6 17%	- -	- -	- -

Table S2. Decrease of Olfactory Neurons (Hu⁺) in PLE/POE Explants Containing the Anterior Neural Ridge in the Presence of the FGF Signaling Inhibitor SU5402

μM SU5402	0	2.5	5
n	5	4	5
% Hu⁺ cells (+/- SEM)	11.67 +/- 1.05	5.26 +/- 0.10	1.97 +/- 0.5
% Hu⁺ cells relative to control	100 +/- 9	45 +/- 1	17 +/- 4
p value		0.001	3.1 x 10 ⁻⁵

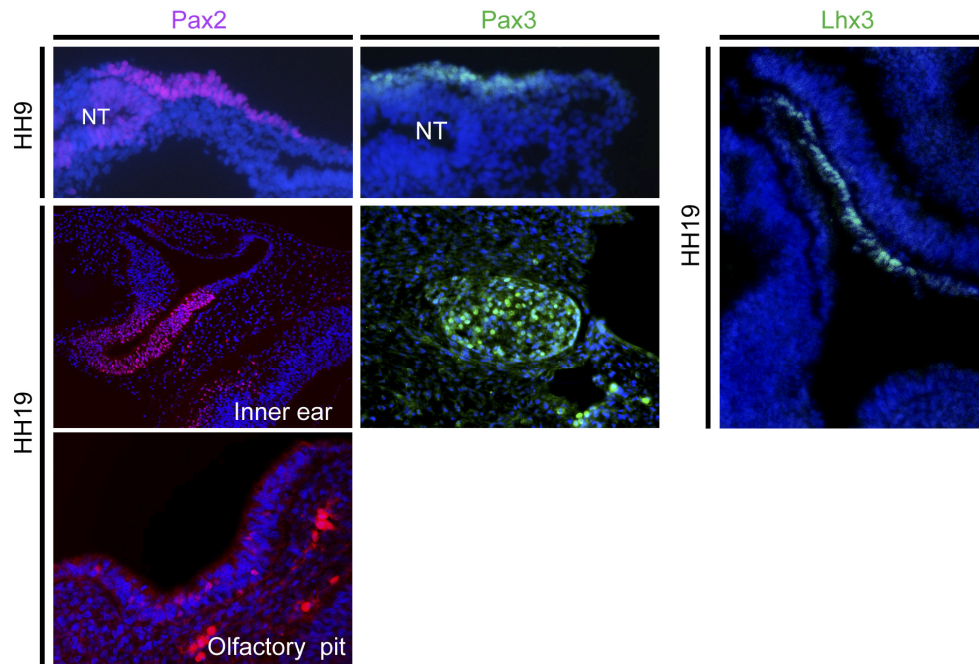


Figure S1. Expression of Otic, Trigeminal and Adenohypophyseal Markers

At stage HH9, Pax2 is expressed in the otic placode and continues to be expressed in the inner ear at HH19. Low level of Pax2 expression is also detected in the olfactory pit. Pax 3 identifies the trigeminal placode at HH9 and is found in the trigeminal ganglion at HH19. Lhx3 marks Rathke's pouch at HH19. NT: neural tube.